IN THE CLAIMS:

1. (CANCELLED)

2. (CURRENTLY AMENDED) The method of Claim 7 ~~1~~ wherein the step of deciding comprises the step of, if the router does not receive a response at all within a predetermined time, deciding that the peer router does not support the new TTL mode of operation.

3. (CANCELLED)

4. (CURRENTLY AMENDED) The method of Claim 7 ~~1~~ wherein the new TTL mode of operation is defined by BGP TTL Security Hack (BTSH).

5. (PREVIOUSLY PRESENTED) The method of Claim 4 wherein the first predetermined value of the TTL parameter is 255.

6. (CURRENTLY AMENDED) The method of Claim 7 ~~1~~ wherein the second predetermined value of the TTL parameter is 1.

7. (CURRENTLY AMENDED) ~~The method of Claim 1 further comprising the steps of, in response to the router receiving a negative acknowledgement of the initial BGP message from the peer router:~~

A method for allowing a router to efficiently determine a time-to-live (TTL) configuration of a peer router in a computer network, the method comprising the steps of:

automatically determining which TTL mode of operation the peer router supports by sending an initial Border Gateway Protocol (BGP) message from the router to the peer router, the initial BGP message including a first predetermined value of a TTL parameter;

if the router receives a positive acknowledgement of the initial BGP message from the peer router, determining that the peer router supports exchanges of messages using a new TTL mode of operation; and

if the router receives a negative acknowledgement of the initial BGP message from the peer router, deciding that the peer router does not support the new TTL mode of operation, and switching to an old TTL mode of operation by resending the initial BGP message with a second predetermined value of the TTL parameter, and subsequently,

upgrading the peer router to the new TTL mode of operation, ;

rebooting the peer router, thereby destroying an existing session between the routers, ;

establishing a new session by sending messages with the first predetermined value of the TTL parameter, ; and

communicating between the routers using messages with the first predetermined value of the TTL parameter.

8-12. (CANCELLED)

13. (CURRENTLY AMENDED) The apparatus of Claim 15 ~~12~~ wherein the means for deciding comprises:

means for deciding that the peer router does not support the new TTL mode of operation, if the router does not receive a response at all within a predetermined time.

14. (CURRENTLY AMENDED) The apparatus of Claim 15 ~~12~~ wherein the new TTL mode of operation is defined by BGP TTL Security Hack (BTSH).

15. (CURRENTLY AMENDED) ~~The apparatus of Claim 12 further comprising:~~

Apparatus adapted to allow a router to efficiently determine a time-to-live (TTL) configuration of a peer router in a computer network, the apparatus comprising:

means for sending an initial Border Gateway Protocol (BGP) message from the router to the peer router, the initial BGP message including a first predetermined value of a TTL parameter;

means for determining that the peer router supports exchanges of messages using a new TTL mode of operation, if the router receives a positive acknowledgement of the initial BGP message from the peer router;

means for deciding that the peer router does not support the new TTL mode of operation, if the router receives a negative acknowledgement of the initial BGP message from the peer router, and for switching to an old TTL mode of operation by resending the initial BGP message with a second predetermined value of the TTL parameter;

means for upgrading the peer router to the new TTL mode of operation;

means for destroying an existing session between the routers;

means for sending messages with the first predetermined value of the TTL parameter; and

means for communicating between the routers using messages with the first predetermined value of the TTL parameter.

16. (CANCELLED)

17. (CURRENTLY AMENDED) The computer readable medium of Claim 20 ~~16~~ wherein the program instruction for deciding comprises one or more program instructions for, if the router does not receive a response at all within a predetermined time, deciding that the peer router does not support the new TTL mode of operation.

18. (CANCELLED)

19. (CURRENTLY AMENDED) The computer readable medium of Claim 20 ~~16~~ wherein the new TTL mode of operation is defined by BGP TTL Security Hack (BTSH).

20. (CURRENTLY AMENDED) ~~The computer readable medium of Claim 16 further comprising program instructions for, in response to the router receiving a negative acknowledgement of the initial BGP message from the peer router:~~

A computer readable medium containing executable program instructions for allowing a router to efficiently determine a time-to-live (TTL) configuration of a peer router in a computer network, the executable program instructions comprising program instructions for:

automatically determining which TTL mode of operation the peer router supports by sending an initial Border Gateway Protocol (BGP) message from the router to the peer router, the initial BGP message including a first predetermined value of a TTL parameter;

if the router receives a positive acknowledgement of the initial BGP message from the peer router, determining that the peer router supports exchanges of messages using a new TTL mode of operation; and

if the router receives a negative acknowledgement of the initial BGP message from the peer router, deciding that the peer router does not support the new TTL mode of

operation, and switching to an old TTL mode of operation by resending the initial BGP message with a second predetermined value of the TTL parameter, and subsequently,

upgrading the peer router to the new TTL mode of operation, ~~;~~

destroying an existing session between the routers, ~~;~~

sending messages with the first predetermined value of the TTL ~~paramter~~parameter, ~~;~~ and

communicating between the routers using messages with the first predetermined value of the TTL ~~paramter~~parameter.

21-25. (CANCELLED)

26. (CURRENTLY AMENDED) The method of Claim 29 ~~25~~ wherein deciding further comprises, if a response is not received within a predetermined time, deciding that the peer router does not support the new TTL mode of operation.

27. (CURRENTLY AMENDED) The method of Claim 29 ~~25~~ wherein the initial message is a Border Gateway Protocol (BGP) routing protocol message.

28. (CURRENTLY AMENDED) The method of Claim 29 ~~25~~ wherein the new TTL mode of operation is a BGP TTL Security Hack (BTSH).

29. (CURRENTLY AMENDED) ~~The method of Claim 25 further comprising, in response to receiving a negative acknowledgement of the initial message from the peer router:~~ A method comprising:

sending an initial message to a peer router before a session is established with the peer router, the initial message including a first predetermined value of a time-to-live (TTL) parameter that makes use of the TTL parameter;

if a positive acknowledgement of the initial message is received from the peer router, determining that the peer router supports exchanges of messages using a new TTL mode of operation; and

if a negative acknowledgement of the initial message is received from the peer router, deciding that the peer router does not support the new TTL mode of operation and switching to an old TTL mode of operation by resending the initial message with a second predetermined value of the TTL parameter, and subsequently,

upgrading the peer router to the new TLL mode of operation, ;

rebooting the peer router, thereby destroying an existing session between the routers, ;

establishing a new session by sending messages with the first predetermined value of the TTL parameter, ; and

communicating using messages with the first predetermined value of the TTL parameter.

30-33. (CANCELLED)